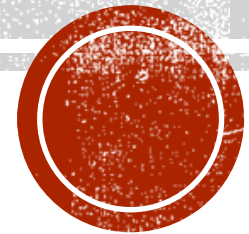




# FIELD INSPECTION ISSUES

Recurring Issues that the PSC Investigators are  
Encountering and Changes to Training Procedures



*Randall D. Hand*  
*Training Coordinator*  
*Alabama Public Service Commission*

**NOTICE OF CONSTRUCTION**

<b>Operator Name:</b>			
<b>District:</b>			
<b>Notification Date:</b>			
<b>Contact:</b>		<b>Phone:</b>	
<b>Construction Location:</b> <small>Provide Closest Intersection to Start Location OR Valid Address</small>			
<b>ANTICIPATED START DATE:</b>			
<b>Check or Fill Each Box that Applies</b>			
<b>Construction Performed By:</b>		<b>Operator:</b> <input type="checkbox"/>	<b>Contractor:</b> <input type="checkbox"/>
<b>Contractor Name:</b>			
<b>Pipe Material:</b>	<b>Steel:</b> <input type="checkbox"/>	<b>P.E.:</b> <input type="checkbox"/>	
<b>Type of Construction:</b>	<b>Extension:</b> <input type="checkbox"/>	<b>Relocation:</b> <input type="checkbox"/>	<b>Replacement:</b> <input type="checkbox"/>
<b>Pipe Specifications</b>			
<b>Project Length :</b>		<b>O.D.:</b>	
<b>Wall:</b>	<small>(in)</small>	<b>SDR::</b> <small>(P.E. only)</small>	<b>SMYS:</b> <small>(steel only)</small>
<b>MAOP:</b> <small>(psig)</small>	<b>Test Pressure:</b> <small>(psig)</small>	<b>Air:</b> <input type="checkbox"/>	<b>Water:</b> <input type="checkbox"/>
<b>Distribution:</b> <input type="checkbox"/>		<b>Transmission:</b> <input type="checkbox"/>	

**DIG SAFELY, CALL FOR A LINE LOCATE 48 HOURS BEFORE EXCAVATING!**

PLEASE SUBMIT THIS NOTICE 2 WEEKS PRIOR TO CONSTRUCTION:

RETURN TO:

ALABAMA PUBLIC SERVICE COMMISSION

GAS PIPELINE SAFETY

P O BOX 304260

MONTGOMERY, AL 36130-4260

OR

FAX (334)242-0687

OR

Email: [felisa.webster@psc.alabama.gov](mailto:felisa.webster@psc.alabama.gov)

*This form was generated in an effort to comply with APSC Gas Pipeline Safety Rule No. 6: "All construction work involving the addition and/or replacement of gas pipelines or mains greater than 1,000 feet in length shall be reported to the APSC before construction begins."*

# CONSTRUCTION NOTICES

Construction Notices are required to be submitted to PSC on ANY line installation to be used for Natural Gas.

Notice of Construction is REQUIRED for 1000 ft or more of any size Main/Line INCLUDING Service lines off of mains.





**NOTICE OF CONSTRUCTION**

<b>Operator Name:</b>			
<b>District:</b>			
<b>Notification Date:</b>			
<b>Contact:</b>		<b>Phone:</b>	
<b>Construction Location:</b> <small>Provide Closest Intersection to Start Location OR Valid Address</small>			
<b>ANTICIPATED START DATE:</b>			
<b>Check or Fill Each Box that Applies</b>			
<b>Construction Performed By:</b>		<b>Operator:</b> <input type="checkbox"/>	<b>Contractor:</b> <input type="checkbox"/>
<b>Contractor Name:</b>			
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<b>Pipe Specifications</b>			
<b>Project Length :</b>		<b>O.D.:</b>	
<b>Wall:</b>	<small>(in)</small>	<b>SDR::</b> <small>(P.E. only)</small>	<b>SMYS:</b> <small>(steel only)</small>
<b>MAOP:</b> <small>(psig)</small>	<b>Test Pressure:</b> <small>(psig)</small>	<b>Air:</b> <input type="checkbox"/>	<b>Water:</b> <input type="checkbox"/>
<b>Distribution:</b> <input type="checkbox"/>		<b>Transmission:</b> <input type="checkbox"/>	

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# CONSTRUCTION NOTICES

Notice form should be filled out completely and accurately.

## BARE MINIMUM INFORMATION

### 1- OPERATOR NAME

### 2- VALID CONTACT NAME and PHONE NUMBER

### 3- ACCURATE CONSTRUCTION LOCATION (beginning intersection or address), attachment of a map does not take the place of filling in location information.

### 4- MATERIAL TYPE (STEEL OR POLYETHYLENE)

### 5- ANTICIPATED STARTING DATE



**NOTICE OF CONSTRUCTION**

<b>Operator Name:</b>			
<b>District:</b>			
<b>Notification Date:</b>			
<b>Contact:</b>		<b>Phone:</b>	
<b>Construction Location:</b> Provide Closest Intersection to Start Location OR Valid Address			
<b>ANTICIPATED START DATE:</b>			
<b>Check or Fill Each Box that Applies</b>			
<b>Construction Performed By:</b>		<b>Operator:</b> <input type="checkbox"/>	<b>Contractor:</b> <input type="checkbox"/>
<b>Contractor Name:</b>			
<b>Pipe Material:</b>		<b>Steel:</b> <input type="checkbox"/>	<b>P.E.:</b> <input type="checkbox"/>
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<b>Pipe Specifications</b>			
<b>Project Length :</b>		<b>O.D.:</b>	
<b>Wall:</b>	(in)	<b>SDR::</b> (P.E. only)	<b>SMYS:</b> (steel only)
<b>MAOP:</b> (psig)	<b>Test Pressure:</b> (psig)	<b>Air:</b> <input type="checkbox"/>	<b>Water:</b> <input type="checkbox"/>
<b>Distribution:</b> <input type="checkbox"/>		<b>Transmission:</b> <input type="checkbox"/>	

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**CONSTRUCTION  
NOTICES**

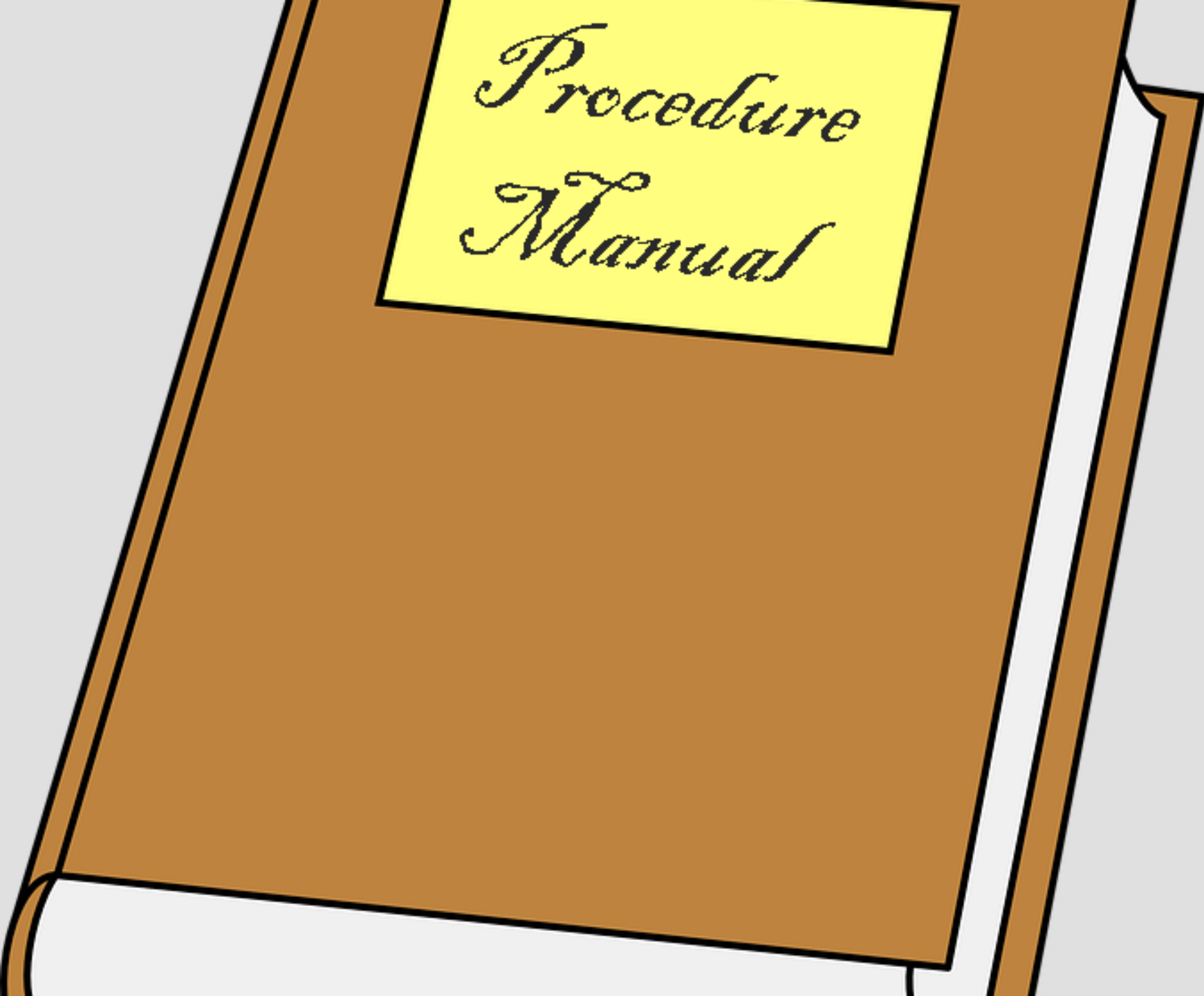
Notices should be submitted **AT  
LEAST TWO WEEKS** prior to the  
beginning of construction.

OR

As soon as confirmation of  
construction is verified.







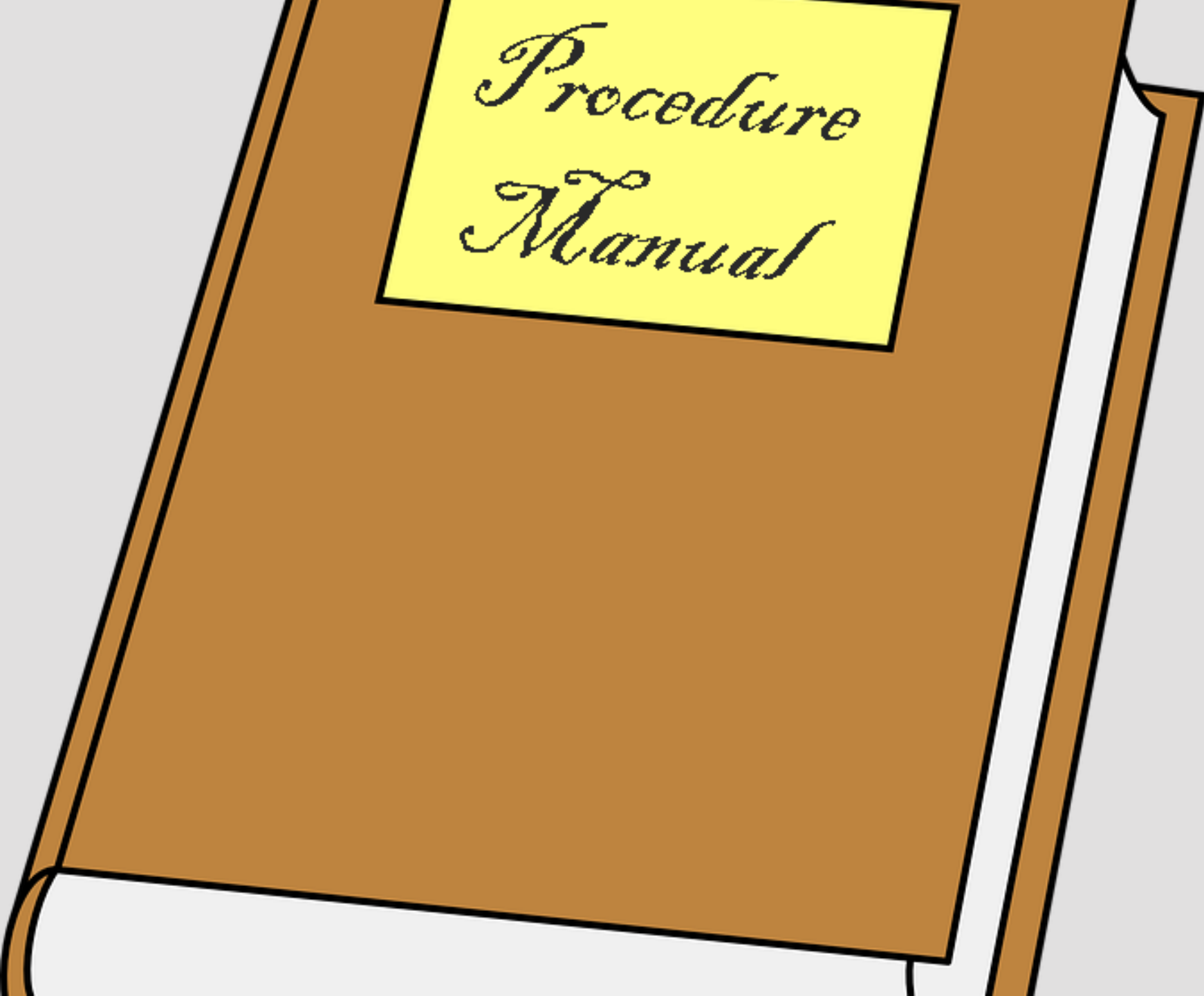
# *Procedure Manual*

## **PROCEDURES**

Common Issues that we are finding  
on job sites.

- 1- Procedures are not on the job site.
- 2- Procedures are not accessible.
- 3- Individuals DO NOT know how to  
take the Manual and locate specific  
Procedures.





# *Procedure Manual*

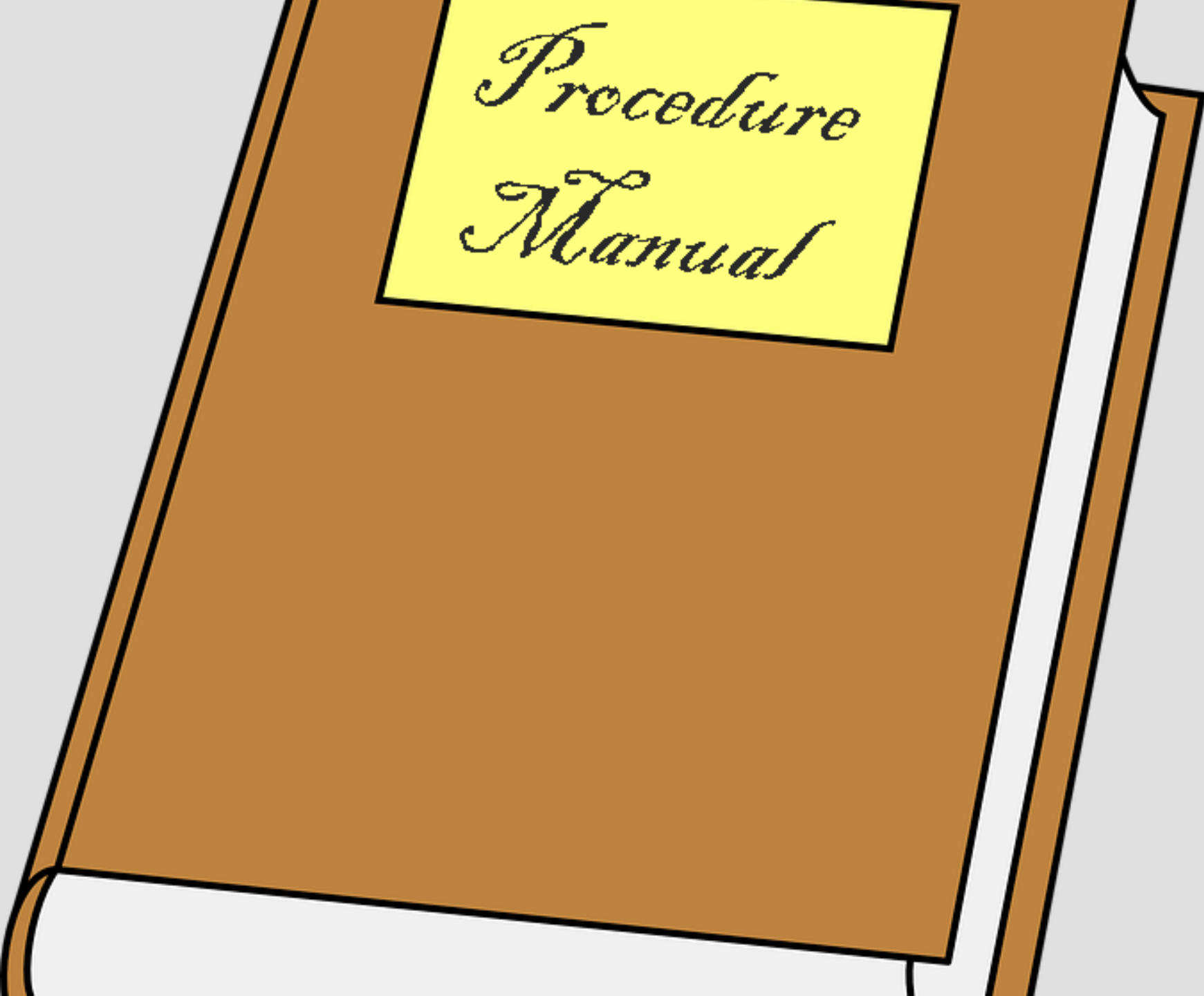
## **PROCEDURES**

Procedures must be on the job site

192.605 (a) ... appropriate parts of the manual must be kept at location where operations and maintenance activities are conducted.







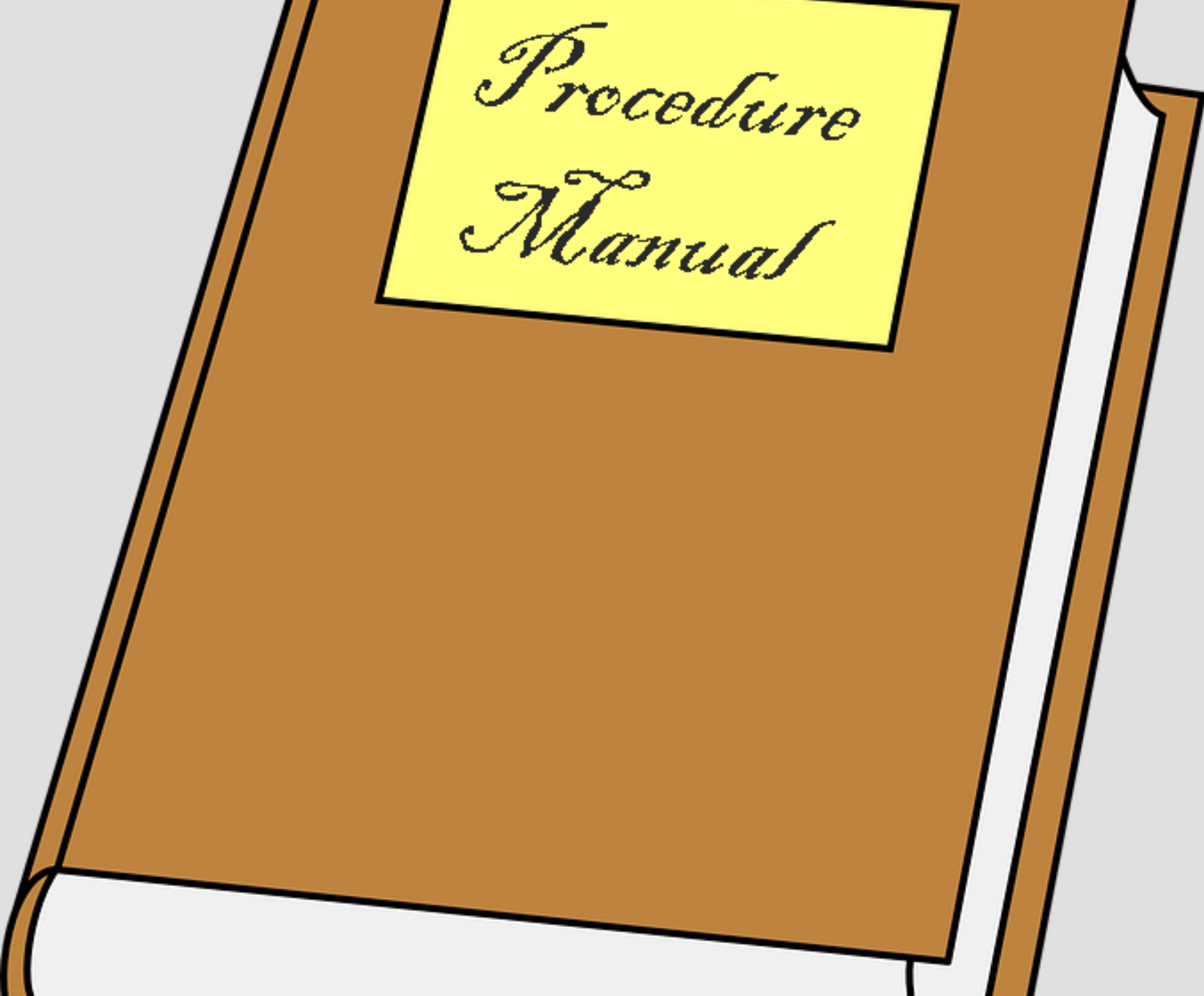
# *Procedure Manual*

## **PROCEDURES**

Manual can be web based/ cloud based etc.

If it is kept electronically, you must know how to access it. You can have written instructions to “walk” you through the process, but you can not call “the office” and get them to help you. This is not acceptable you must be able to access it on your own in the field.





# *Procedure Manual*

## **PROCEDURES**

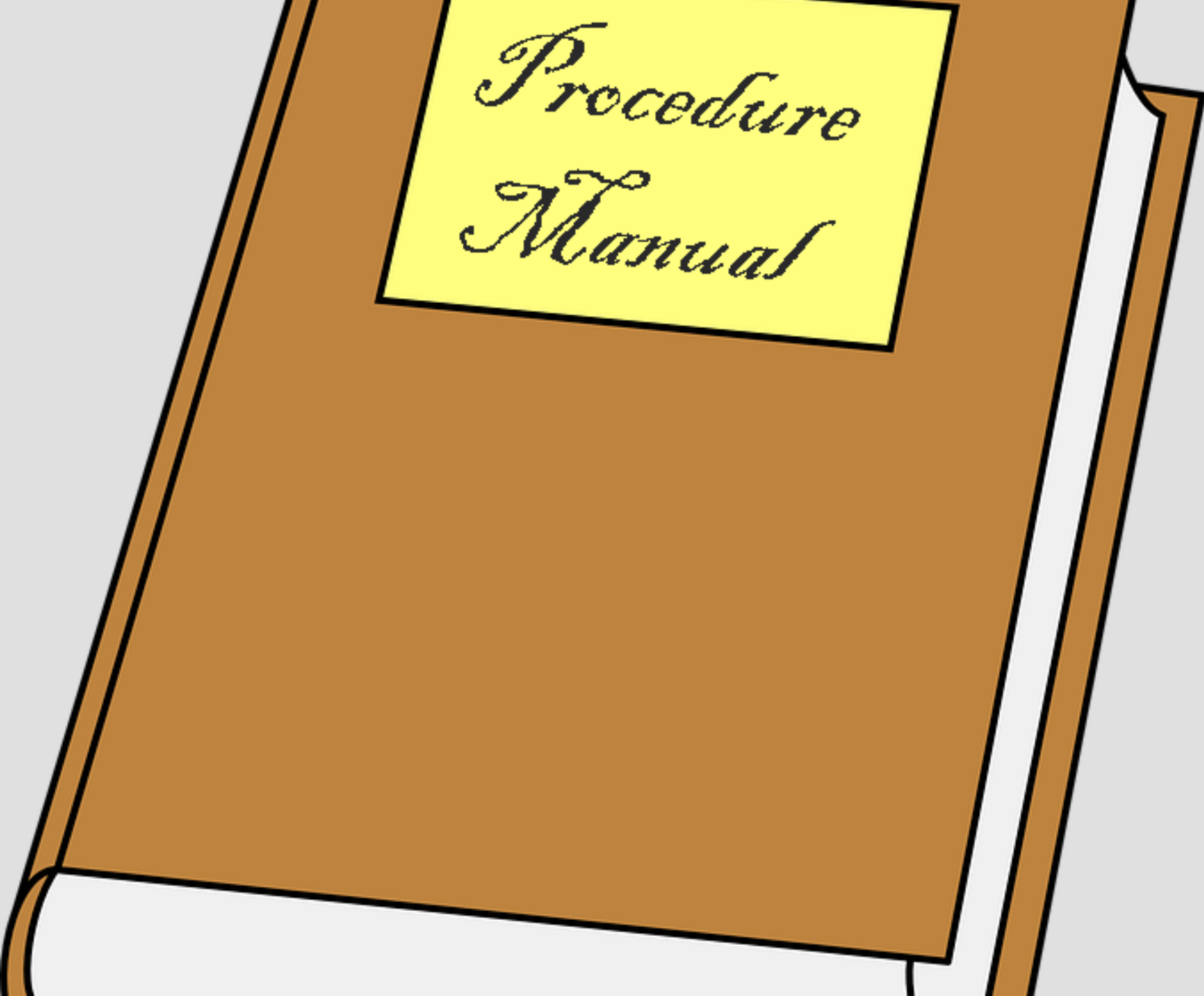
Procedures listed in the manual that are being performed must be followed as they are written.

If procedure is not being followed as written, it can result in a violation .

Can not skip a section because “it doesn’t work that way” or “we don’t do it that way”







# *Procedure Manual*

## **PROCEDURES**

If procedures are found to be irrelevant , incorrect, outdated etc.

Let someone know!

There is a process to change them  
and it is not complicated.



# PROOF OF QUALIFICATION

Qualification proof should be kept on the job site. Each individual performing covered task must have proof of qualification.

If proof of qualification is not on job site, work may be suspended until proof of qualification can be verified.

**GAS OPERATIONS AND CONSTRUCTION ASSIGNED TASK:**  
Gas Operations and Construction Assigned Tasks:  
Abandoning of Service - Lines and Mains Conducting Gas Leakage Surveys • Corrosion Control -  
Applying Pipe Coating in the Field as part of Maintenance Corrosion Control - Checking/Replacing  
Electrical Isolation Couplings on Existing Pipelines Corrosion Control - Cleaning and Coating Pipe for  
Atmospheric Corrosion  
Corrosion Control - Clearing a Shorted Casing Corrosion Control - Inspecting Shorted  
Corrosion Control - Inspecting for Atmospheric Corrosion Control - Inspecting the Condition of Exposed  
Coatings and Rechecking after Clearing a Short Corrosion Control - Inspection of an Anode on an Existing Pipeline  
Pipe or Pipe Coating Corrosion Control - Installation/Replacement of Protection Rectifier on an Existing Pipeline  
Corrosion Control - Installing or Replacing a Corrosion Test Station on Existing Pipeline for Electrical  
Measurement Corrosion Control - Interference Testing Corrosion Control - Measuring Pipe-to-Soil  
Potential Corrosion Control - Visually Inspecting for Internal Corrosion Damage Prevention and  
Excavation Inserting Plastic Pipe into a Casing  
Inspecting and Operating Valves Inspecting/Repairing a Recording Gauge at Pressure Regulator  
Stations  
Investigating Leak and Odor Complaints

**ATOR QUALIFIED  
A NATURAL GAS**

**RANDALL HAND**

**GAS OPERATIONS  
&  
CONSTRUCTION**

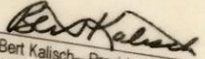
**APGA Security and Integrity Foundation**  
Operator Qualification Training & Evaluation  
Certificate of Completion

Name: Randall Hand

Date: September 13, 2006

This Certificate Confirms that the Named Attendee has Successfully  
Completed Training & Evaluation for the ASME B31Q Covered Tasks Listed  
on the Back of this Card.

For Verification of Completion or Questions Regarding  
Qualification Please Call (202)370-6211

  
Bert Kalisch—President/CEO  
APGA Security and Integrity Foundation





# PROOF OF QUALIFICATION

Qualification proof should have task  
that the individual is covered to  
perform

Date that Qualification was obtained  
and requalification date.

**GAS OPERATIONS AND CONSTRUCTION ASSIGNED TASK:**  
Gas Operations and Construction Assigned Tasks:  
Abandoning of Service - Lines and Mains Conducting Gas Leakage Surveys • Corrosion Control -  
Applying Pipe Coating in the Field as part of Maintenance Corrosion Control - Checking/Replacing  
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Corrosion Control - Inspecting for Atmospheric Corrosion Control - Inspecting the Condition of Exposed  
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Corrosion Control - Installing or Replacing a Corrosion Test Station on Existing Pipeline for Electrical  
Measurement Corrosion Control - Interference Testing Corrosion Control - Measuring Pipe-to-Soil  
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CONSTRUCTION**

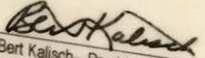
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Bert Kalisch—President/CEO  
APGA Security and Integrity Foundation



# PROOF OF FUSION QUALIFICATION

Proof of qualification for fusion,  
MUST BE WITH THE INDIVIDUAL  
doing the fusing.

 **QUALIFICATION OF JOINING POLYETHYLENE**  
**CERTIFIES THAT**  
**PROCEDURE:** 1UNV-2708B  
1UNV-2708SO  
1UNV-4710SA  
1CENTRAL  
1MTDTRIFUSION

Randall D. Hand  
1UNV-2708SA  
1UNV-4710B  
1UNV-4710SO  
1FRIATEC

**QUAL. NO:** 14344

**COMPLETED REQUIREMENTS FOR**  
**QUALIFICATION ON GAS PIPE FOR:**  
PE2708/4710 RESIN PPI VALIDATED

☒ BUTT FUSION ☒ SADDLE FUSION  
☒ SOCKET FUSION ☒ ELECTROFUSION  
☐ MECHANICAL JOINT

4/7/2017  
DATE


WJ  
ADMIN, GAS  
PIPELINE  
SAFETY





# PROOF OF FUSION QUALIFICATION

The fusion qualification that the PSC  
provides is **ONLY** good for  
**UNIVERSAL PROCEDURES**

 **QUALIFICATION OF JOINING POLYETHYLENE**  
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Randall D. Hand  
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4/7/2017 *WD* ADMIN, GAS  
DATE PIPELINE  
SAFETY

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If you are using different parameters  
for fusing-

Temperature, Heating Times, Bead  
Size etc,





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☒ **SOCKET FUSION** ☒ **ELECTROFUSION**  
☐ **MECHANICAL JOINT**

**ADMIN, GAS**  
**PIPELINE**  
**SAFETY**

**4/7/2017**  
**DATE**

*WJ*

The fusion qualification that the PSC  
provides is **ONLY** good for  
**UNIVERSAL PROCEDURES**

If you are using different parameters  
for fusing-


Temperature, Heating Times, Bead  
Size etc,

This card is **NOT** valid.

If you are using parameters different  
than the procedures you provide us  
and you **DO NOT** have proof of  
qualification under those  
procedures.



# PROOF OF FUSION QUALIFICATION

 **QUALIFICATION OF JOINING POLYETHYLENE**  
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☐ MECHANICAL JOINT

**ADMIN, GAS**  
**PIPELINE**  
**SAFETY**

**4/7/2017**  
**DATE**

*WJ*

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If you are using different parameters for fusing-

Temperature, Heating Times, Bead Size etc,

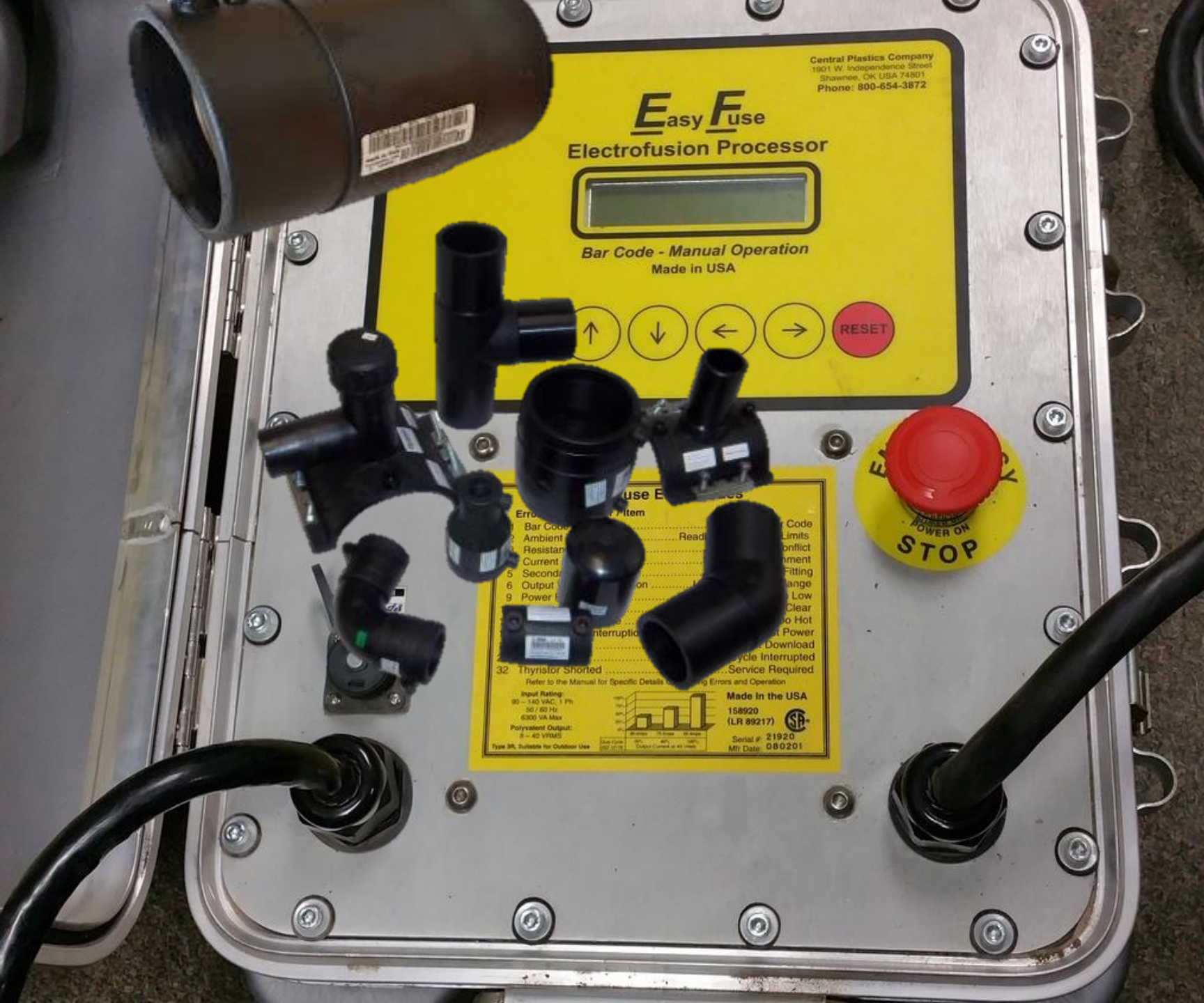
This card is **NOT** valid.

If you are using parameters different than the procedures you provide us and you **DO NOT** have proof of qualification under those procedures.

You may receive a violation and all of the fuses that you have done may be removed from where they were installed.







# ELECTROFUSION

Lack of Electrofusion Procedures

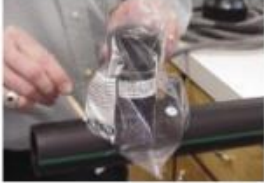
Procedures are not being followed





## **Electrofusion Joining Procedures for Sidewall/Saddle Fittings** **(for use with under-clamp on 1-1/4" - 6" fitting bases)**

1.) Identify the location of the fitting to be installed on the pipe and mark the area with a non-greasy marker.



2.) Check the pipe surface for any embedded debris that may cause damage to scraping tools making sure that the outer pipe surface is clean and free of any dirt or mud that could recontaminate the scraped pipe surfaces.

3.) Scrape the area to be fused with an approved scraping tool. Make sure that the appropriate amount of material is removed approx. .007" to .0010".

**Do not use abrasives, grinding wheels, or other devices that do not cleanly remove the contaminated material.**

**NOTE:** The purpose of scraping is to remove material from the pipe surface. Simply roughing up the fusion area will not allow an acceptable bond to take place. (see "Proper Pipe Preparation" page 3 )



4.) Avoid touching the scraped pipe surface or the inside of the fitting as body oils and other contaminants can affect fusion joint performance. If the surfaces become contaminated, clean thoroughly with a clean, lint free towel and a **minimum 70%** concentration of isopropyl alcohol and allow to dry before assembling. **Do not use alcohol with any additives other than water.**

### **CAUTION:**

AVOID ALL POSSIBLE RECONTAMINATION OF THE PREPARED SURFACE.

# **ELECTROFUSION**

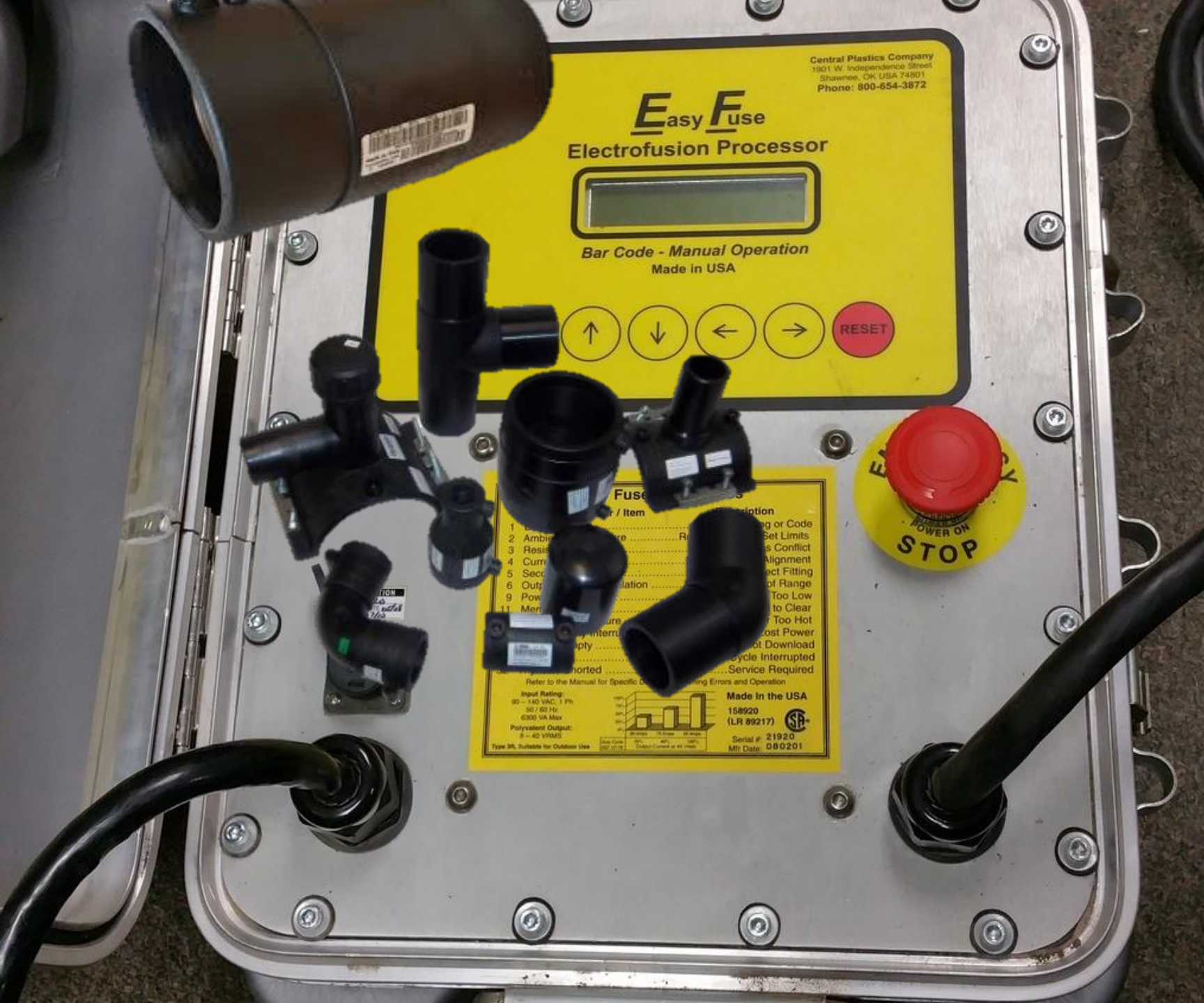
Procedures are "USUALLY" provided with the fitting being used.

They are generally on the packaging or inside of the packaging.

You must follow the procedures provided by the manufacturer at a minimum.







# ELECTROFUSION

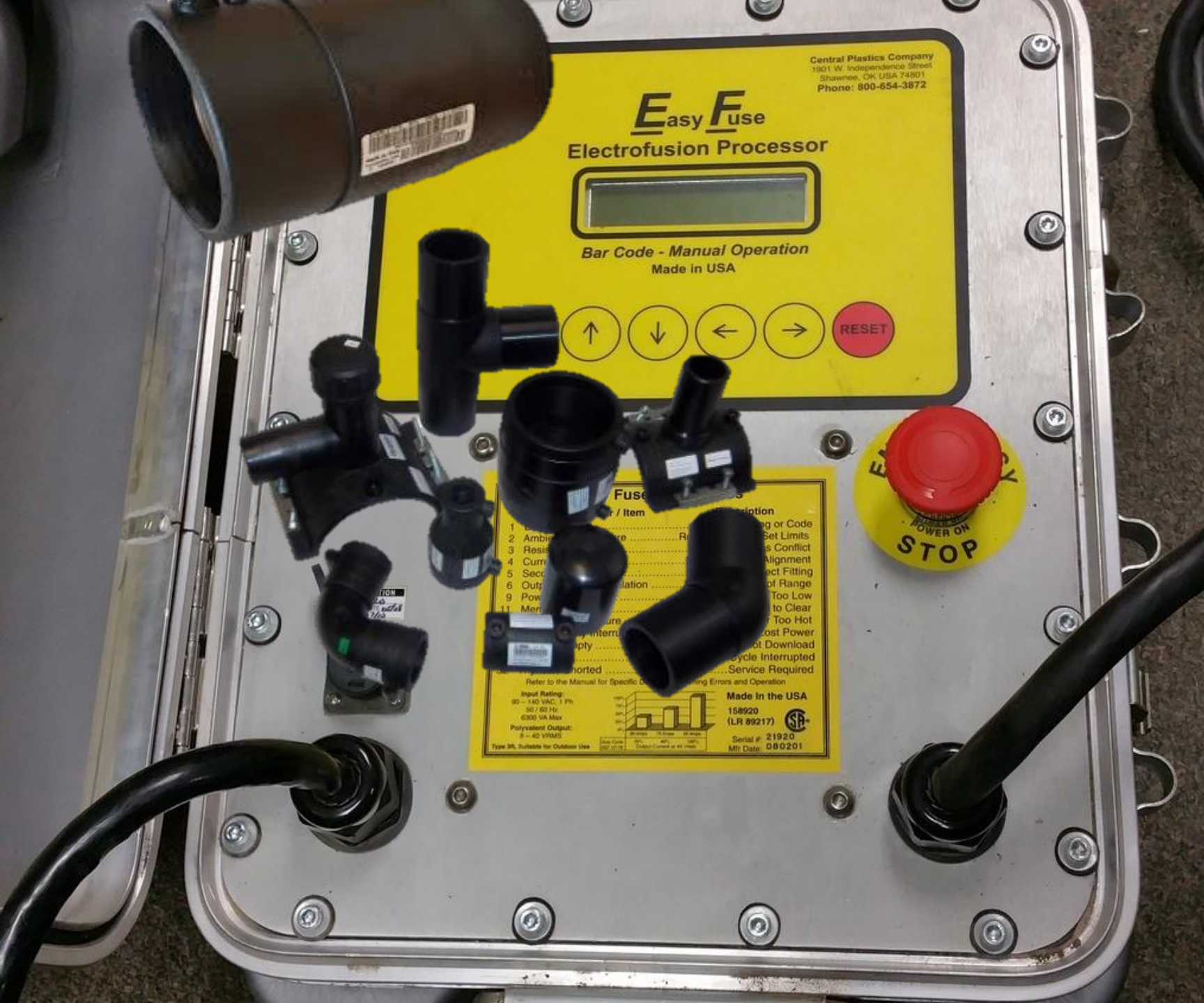
Pipe preparation issues.

Proper scraping methods are not being used.

Pipe and Fittings are not being properly marked, supported or clamped





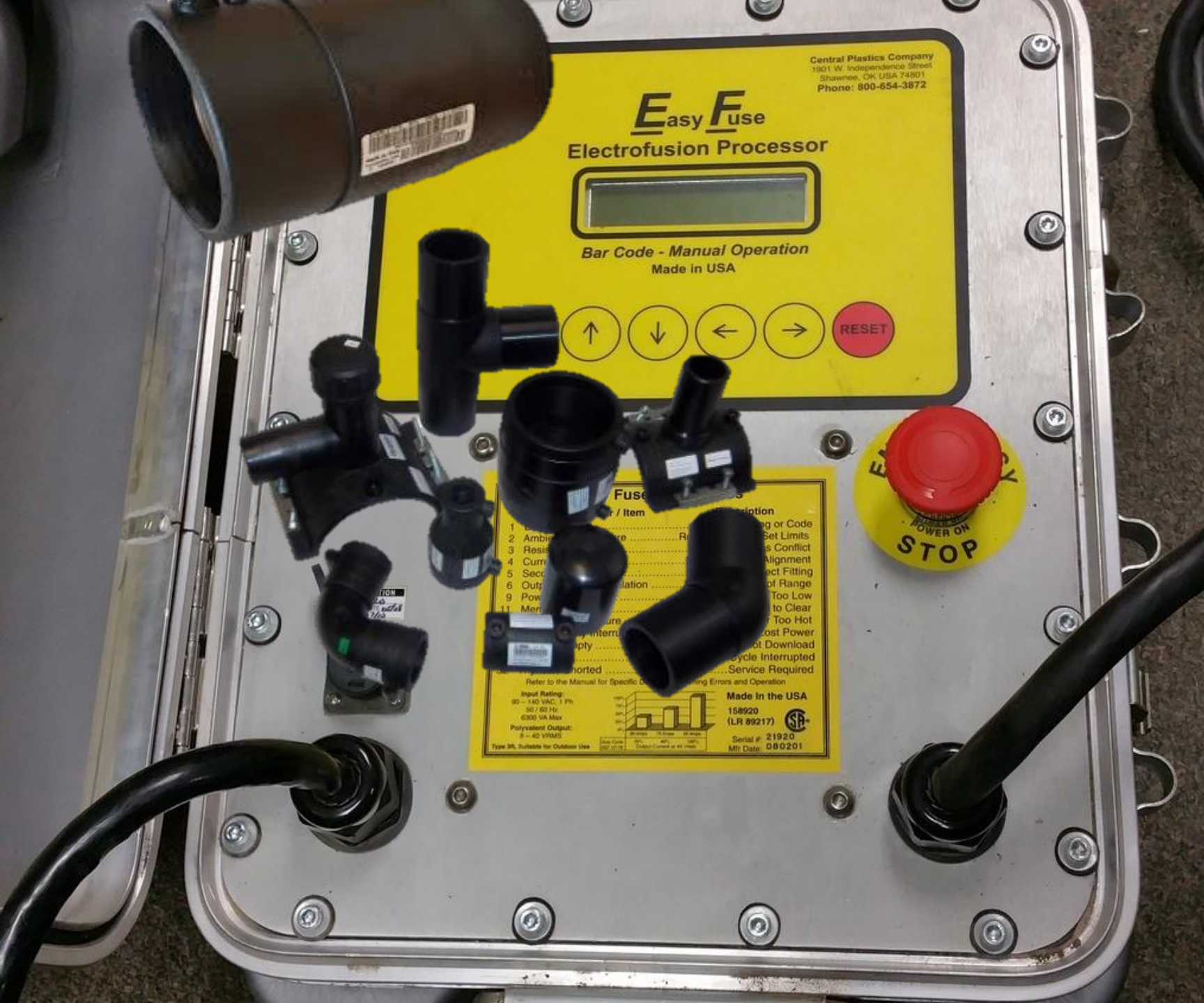


# ELECTROFUSION

The majority of all Electrofusion fitting manufacturers procedures require "THE USE OF AN APPROVED SCRAPER" however the preferred method of pipe preparation is some type of "peeler" style tool.







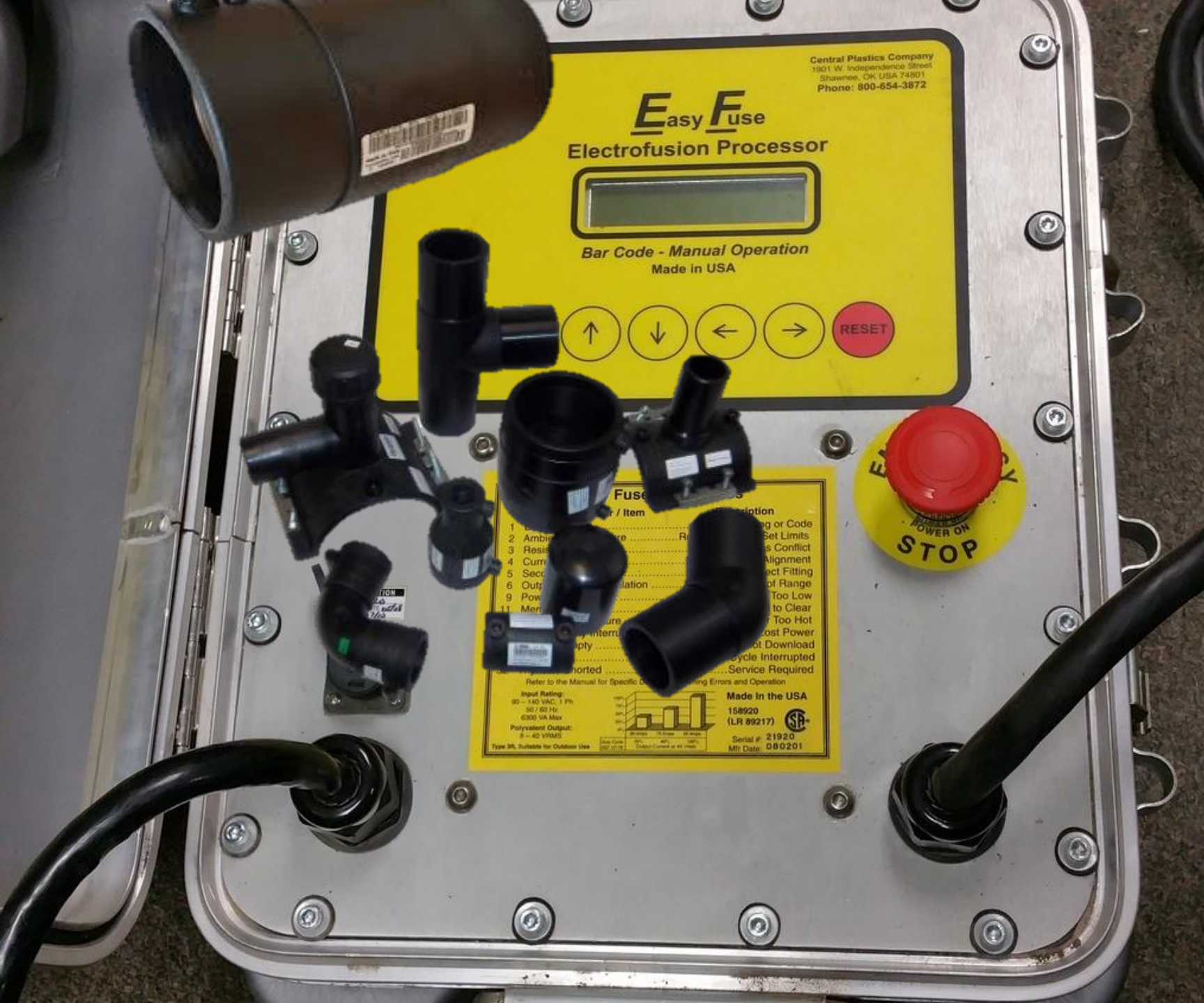
# ELECTROFUSION

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The approved style of scraper varies with the manufacturer.







# ELECTROFUSION

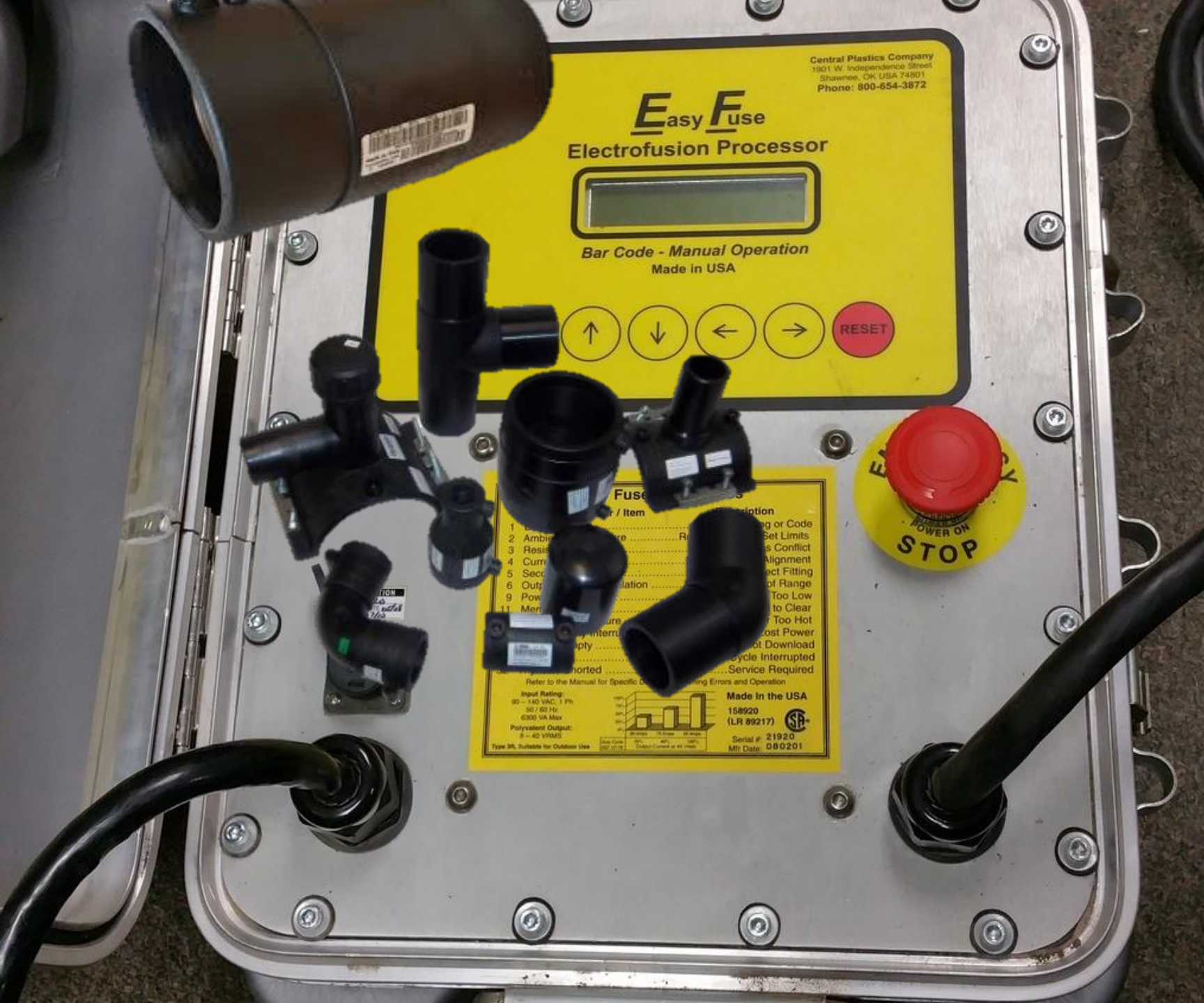
The majority of all Electrofusion fitting manufacturers procedures require “THE USE OF AN APPROVED SCRAPER” however the preferred method of pipe preparation is some type of “peeler” style tool.

The approved style of scraper varies with the manufacturer.

You must have a tool that is specified in your procedures.







# ELECTROFUSION

Methods that are NOT approved-

Abrading Cloth (sandpaper)

Razor Blades

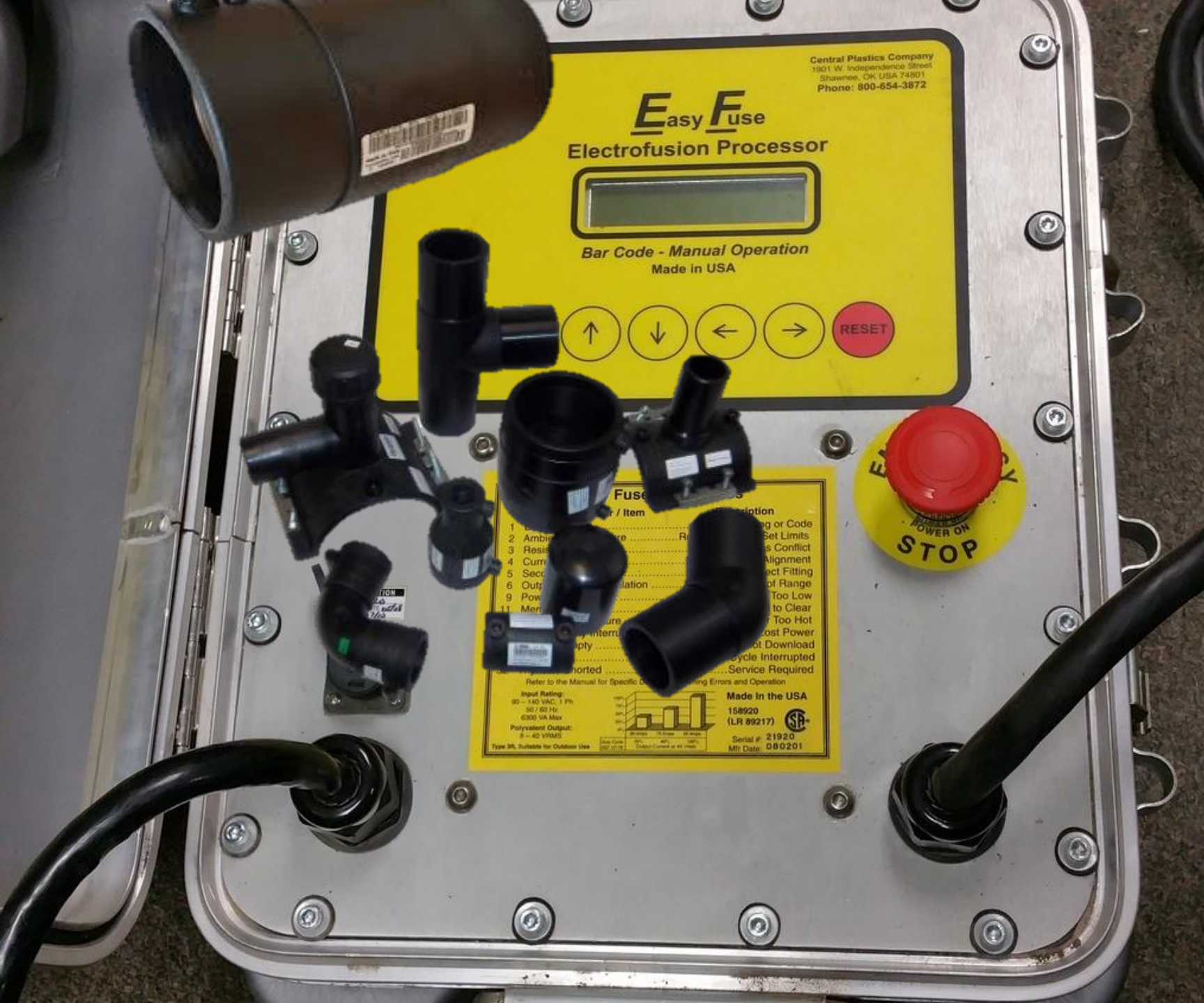
“scotch brite pads”

Farriers Rasp

Pocket Knife







# ELECTROFUSION

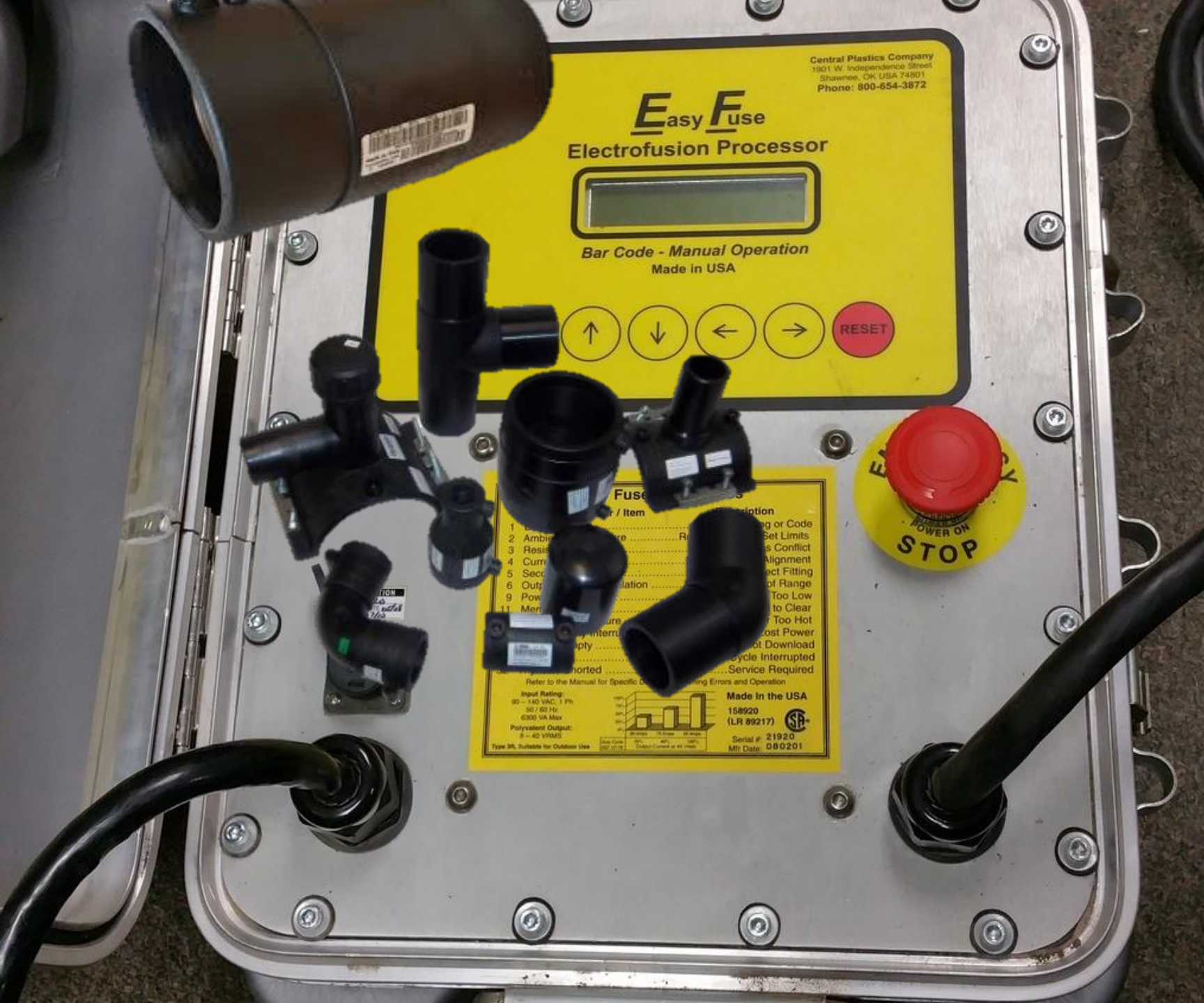
Pipe Scraping Tools must be capable of –

Removing the oxidation on the outer surface of the pipe.

Removing the material in a consistent smooth manner.







# ELECTROFUSION

Electrofusion Processors must be updated and calibrated in accordance with the manufacturers recommendations.







## ELECTROFUSION

Depth should be marked to insure that pipe/ coupling do not shift during fusion.

Clamping is not required on certain size pipe but it is recommended.







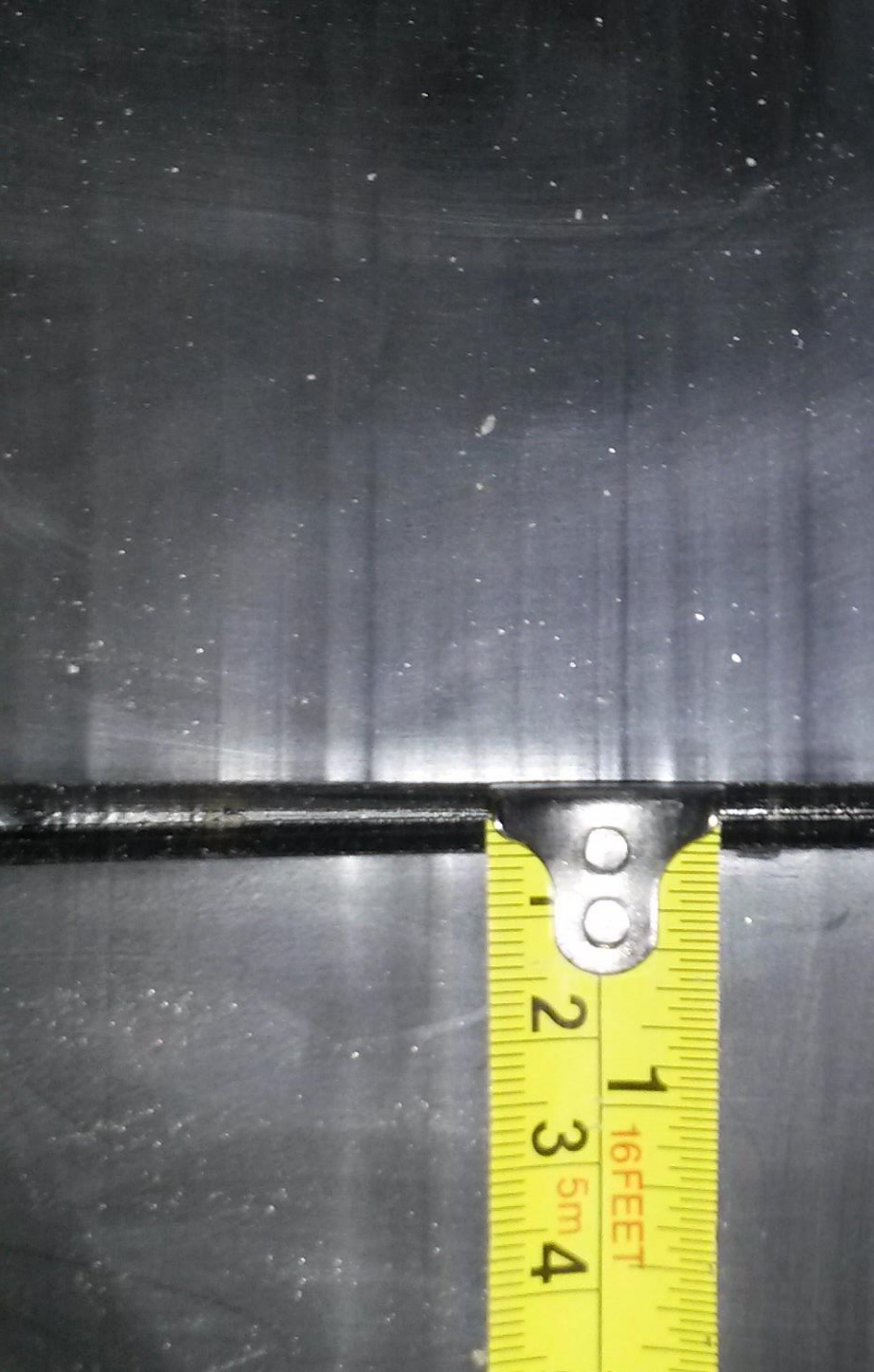
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## ELECTROFUSION

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# EQUIPMENT MAINTENANCE AND UPKEEP

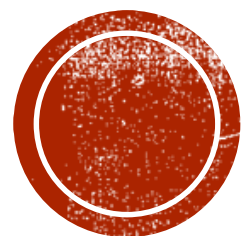


## EQUIPMENT MAINTENANCE

***All equipment used in the fusion process must be in Proper Working Condition***







**EQUIPMENT MUST WORK  
THE WAY IT WAS  
DESIGNED TO WORK**





# FUSION HEATER PLATES MUST HAVE THE PLATE ON THEM.

**Can NOT use a plate without the  
Teflon Plate**



**Heater MUST have the Teflon plate  
on it**

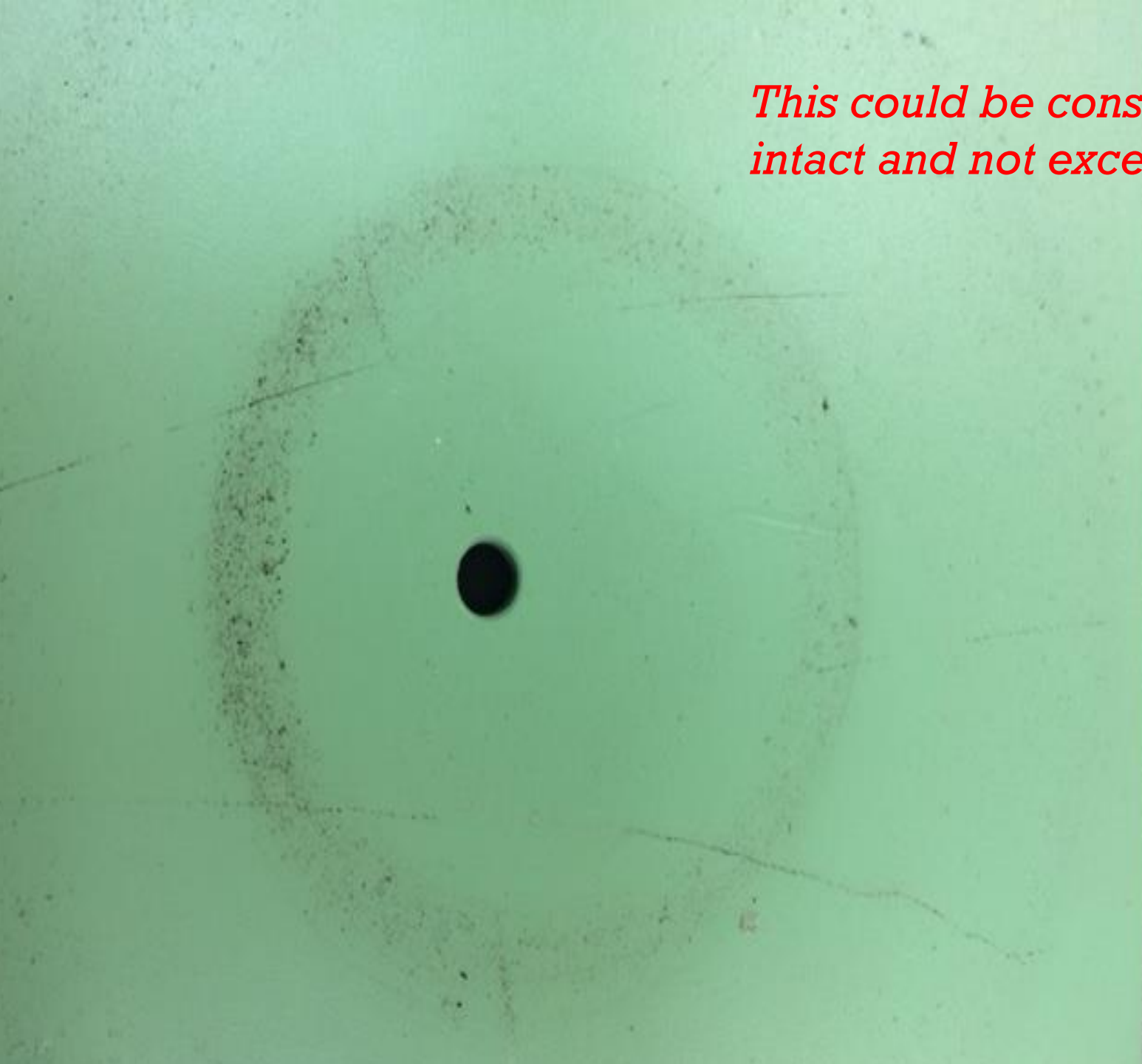




## ***Unacceptable Heater Plates***



*This could be considered acceptable, coating is still intact and not excessively gouged.*





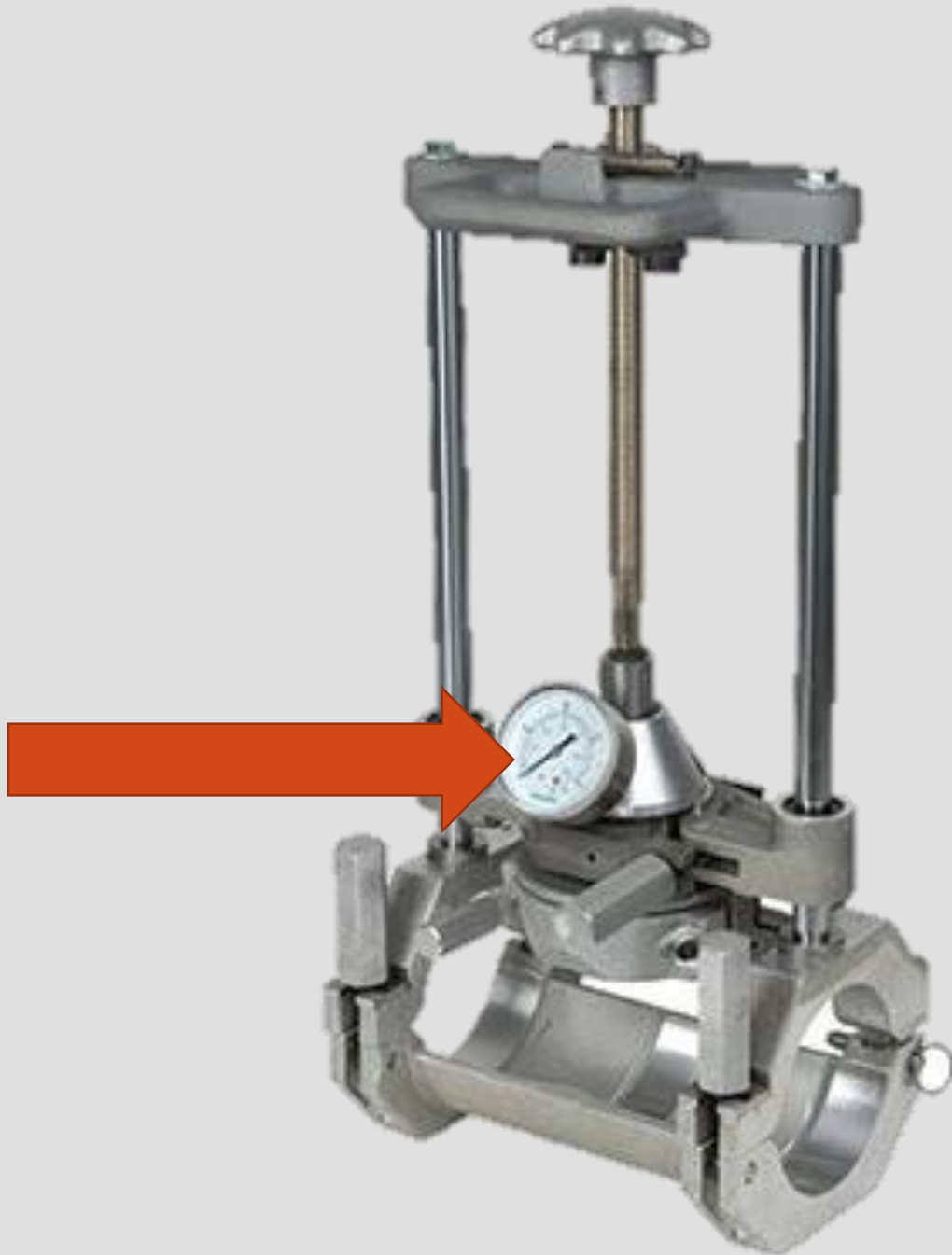
# SIDEWALL MACHINE

Rails should be smooth and clean.

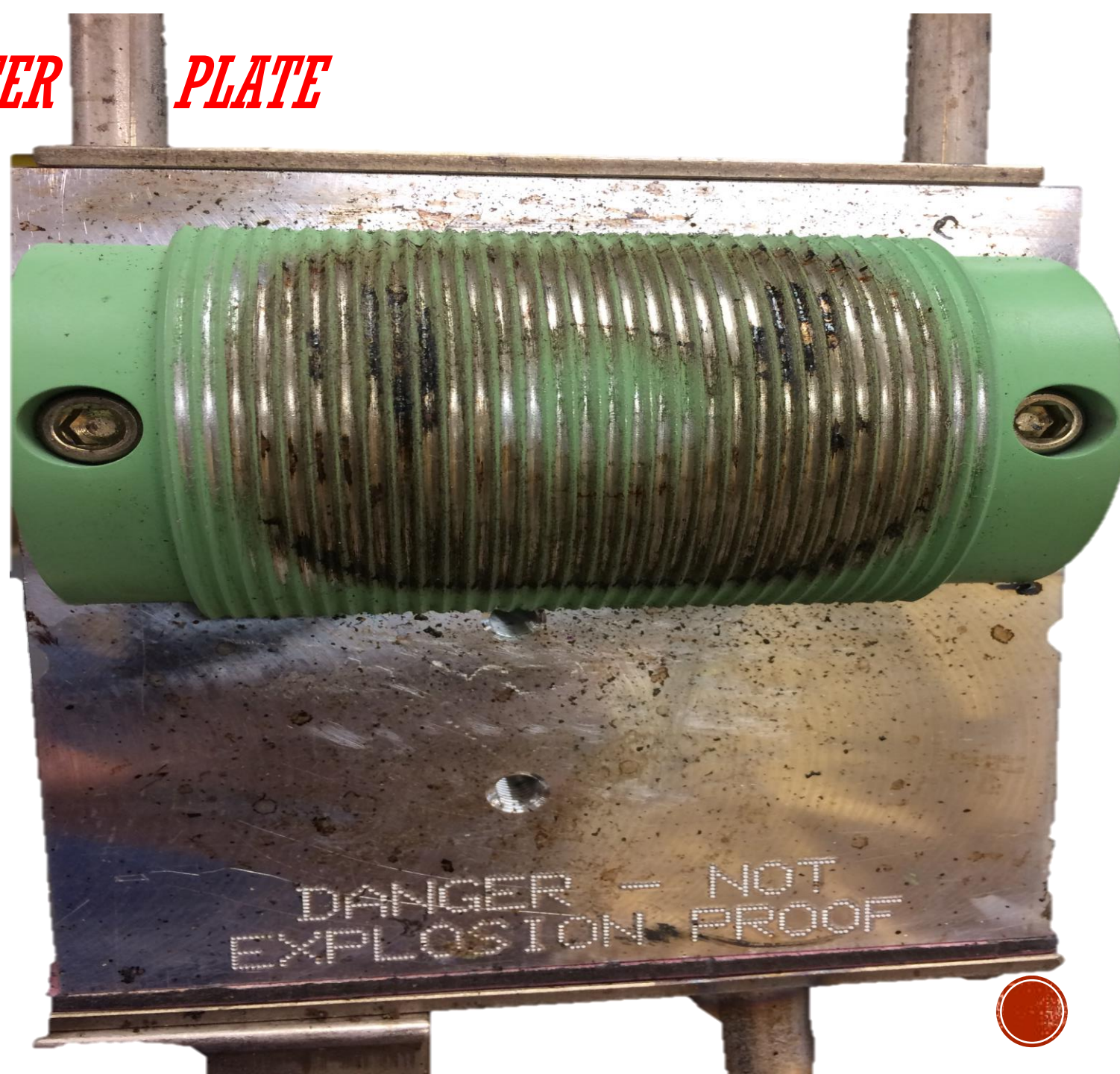
Head unit should travel freely.

Gauge must be on the machine and in FUNCTIONING order. (probably should at least start out on zero)

Should have the proper pipe inserts for the size pipe being used.



***UNACCEPTABLE SIDE WALL HEATER PLATE***











***Excessive Ink residue build  
up on heater plate***

The image shows a large industrial machine, likely a flexographic printing press, with a green heater plate. The heater plate is covered in a thick, dark, circular pattern of ink residue, indicating excessive build-up. The machine has a metal frame with various components, including a large metal plate on the left and a metal plate on the right. The background shows a dark, industrial setting with a yellow floor.



# BUTT FUSION CRADLE

Cradle should move freely

Rails should be straight, smooth.

Proper Pipe inserts should be installed to match the size pipe being fused.





# BUTT FUSION CRADLE

Cradle should move freely

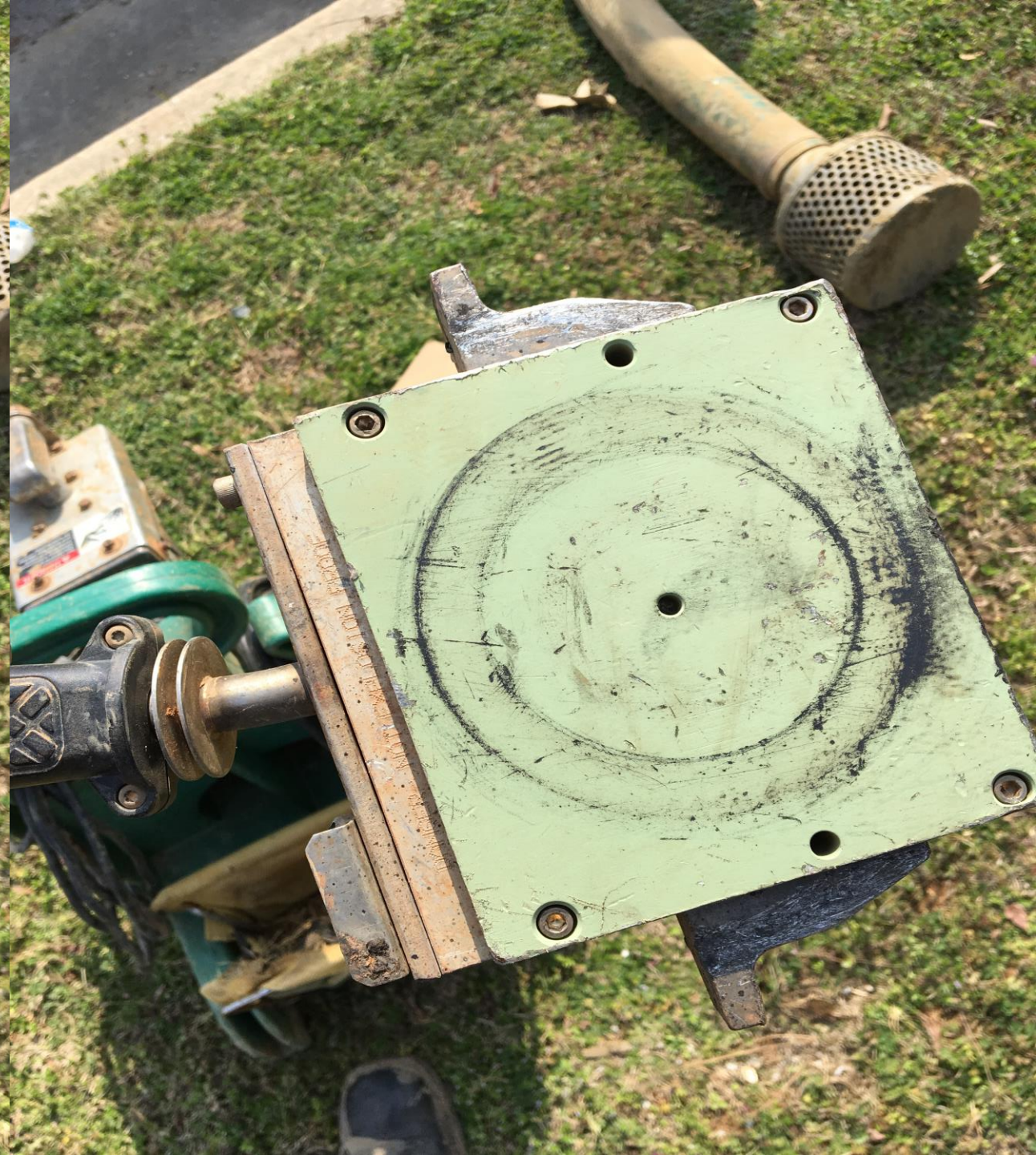
Rails should be straight, smooth.

Proper Pipe inserts should be installed to match the size pipe being fused.

Well Maintained Equipment DOES NOT look like this.









**FUSION PROCEDURE  
REQUIRES THE USE OF  
A PYROMETER**





**ALL HEATER PLATE TEMPERATURES MUST BE VERIFIED WITH A PYROMETER OF SOME KIND, THE DIAL GAUGES ON THE HEATER ARE NOT CONSIDERED ACCURATE.....**







## **FACTORY TEMP. GAUGES**

Not accurate, CAN NOT be used as  
verification of heater plate  
temperature.







# DIRECT CONTACT PYROMETER

Simple to use.







## LASER PYROMETER

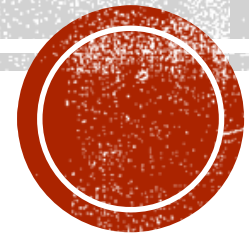
Must be able to demonstrate the proper +/- formula for the type of laser being used.

The point and shoot method does not necessarily give a correct/accurate number.

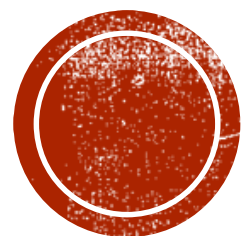




# PIPE HANDLING PROCEDURES







**EVERY OPERATOR HAS SOME  
TYPE OF PIPE HANDLING  
PROCEDURE IN PLACE.**





# **FOLLOWING HANDLING PROCEDURES**

Pipe should be handled properly at ALL times.

This includes how it is stacked and stored on the job site.







# **FOLLOWING HANDLING PROCEDURES**

Pipe should be handled properly at ALL times.

This includes how it is stacked and stored on the job site.

ALL pipe manufacturers have guidelines on how pipe should be stored and handled.







**ROLLERS OR SOME  
TYPE OF BARRIER  
SHOULD BE USED  
TO AVOID DAMAGE  
TO PIPE**







**UNACCEPTABLE**







**SIGN POST CAUSED  
REMOVAL OF  
EXTERNAL BEAD**







# **CORRECT USE OF ROLLERS AND CRIBBING**







## **INCORRECT USE OF CRIBBING**







**MATTING DOES  
NOT MAKE IT  
BETTER**





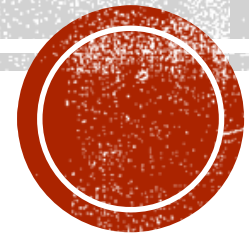


**SERVICE LINE  
BORED UNDER  
STREET AND LEFT  
EXPOSED ON NEW  
HOME  
CONSTRUCTION  
SITE**

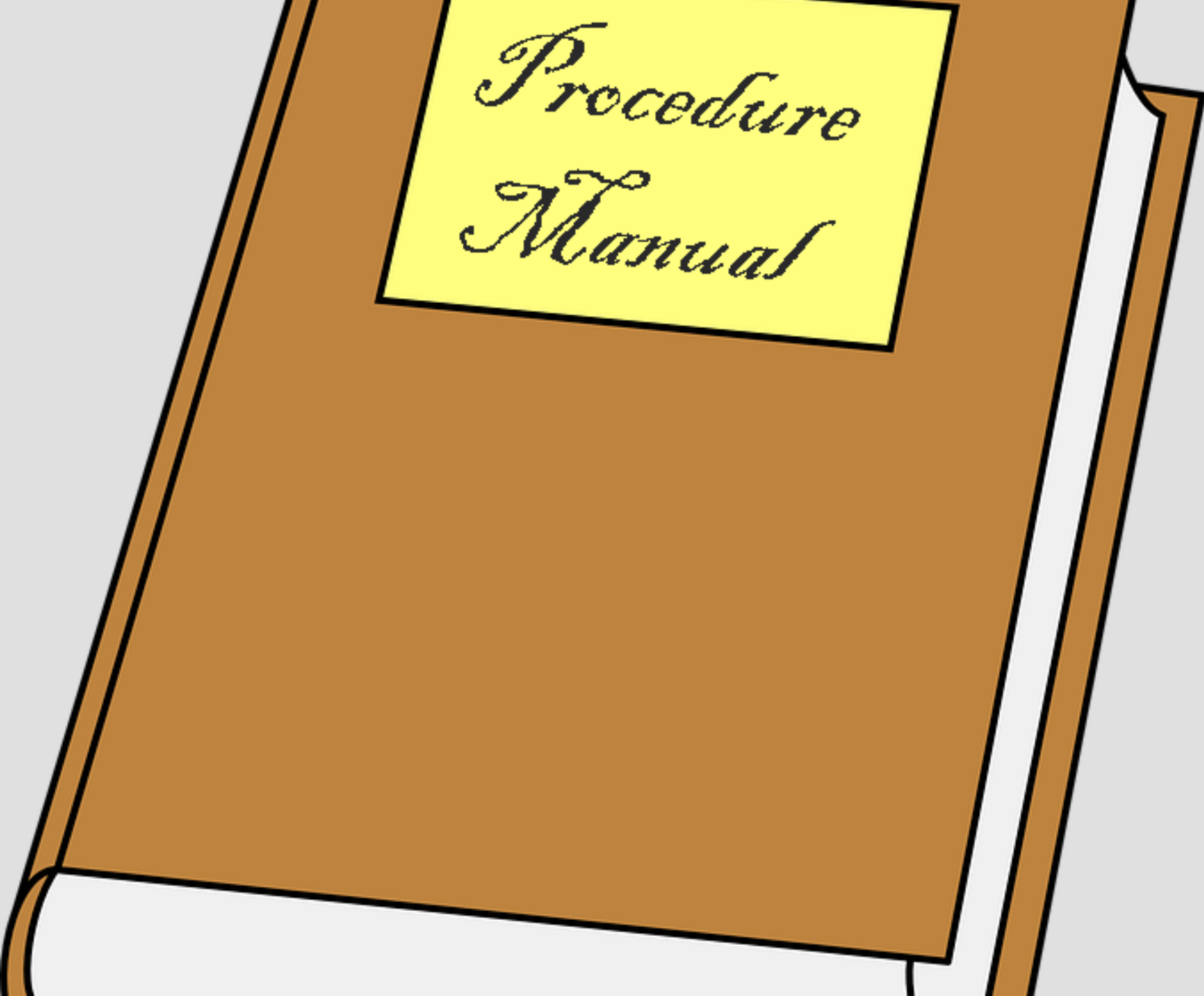




# **FOLLOW PIPE HANDLING PROCEDURES**







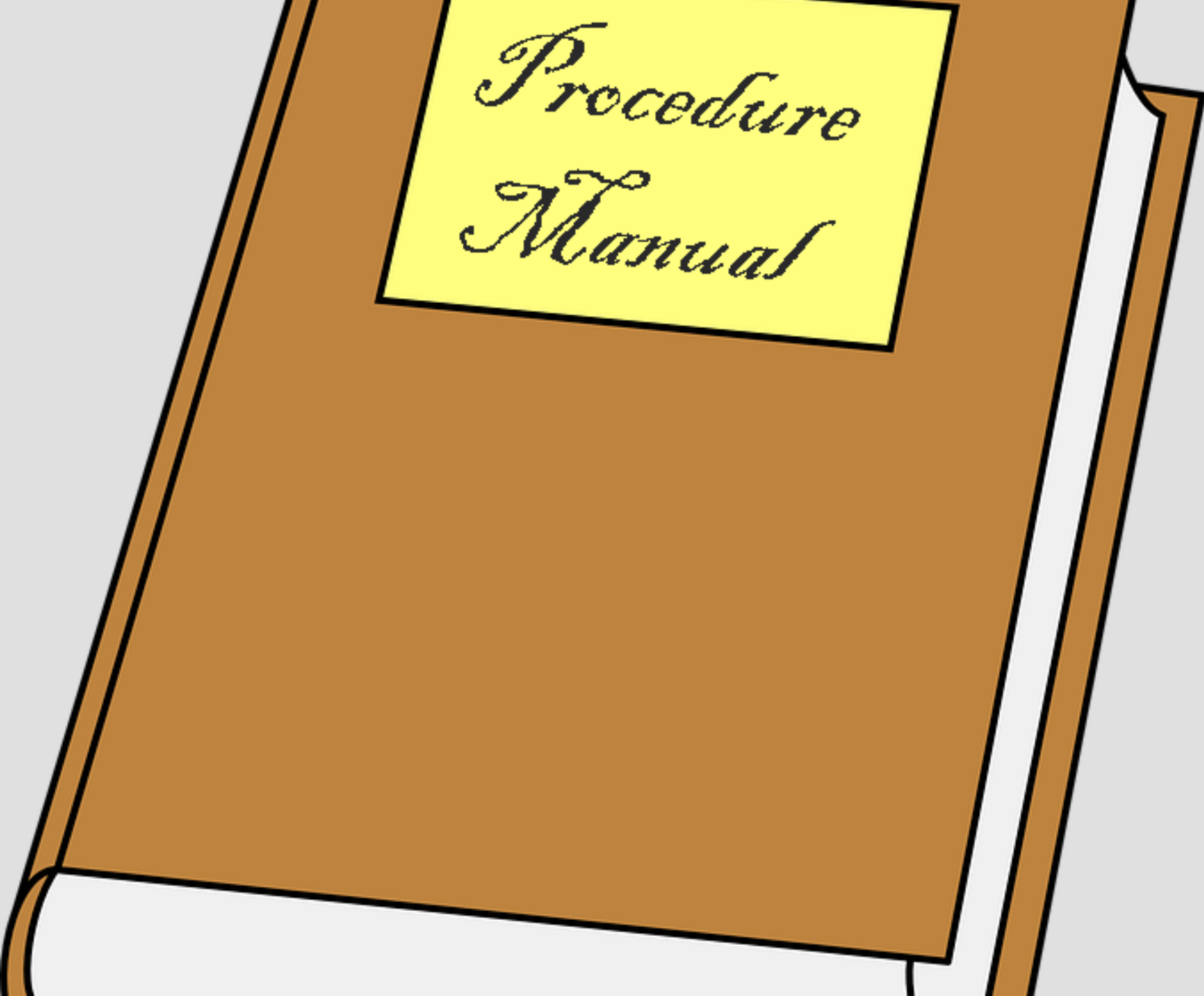
# *Procedure Manual*

## **BOTTOM LINE**

Become familiar with the procedures put in place by the company you are working for.







# *Procedure Manual*

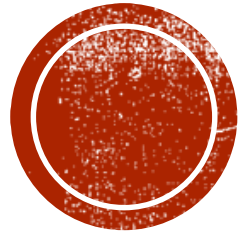
## **BOTTOM LINE**

Become familiar with the procedures put in place by the company you are working for.

**FOLLOW** the procedures that have been adopted by that company.







# QUESTIONS AND DISCUSSIONS . . . .







***RANDALL D. HAND***  
***ALABAMA PUBLIC***  
***SERVICE***  
***COMMISSION***

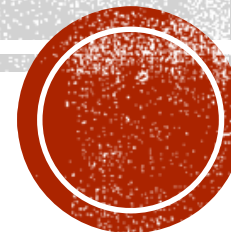
[Randall.Hand@PSC.Alabama.gov](mailto:Randall.Hand@PSC.Alabama.gov)

1-334-850-0044



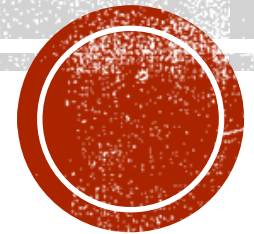


# **PE QUALIFICATION CHANGES FOR 2018**





**WHAT WE WILL NEED**





# LARGE FACILITIES

Facilities will need to be large enough to accommodate 75-125 individuals (or more)





# **CENTRALIZED LOCATION TO EACH “AREA”**

Will need to be in an area that multiple systems can travel to  
without it being excessively far.





# **WILL NEED 5-7 LOCATIONS IN EACH SECTION OF THE STATE**

The state will be divided into three sections, Northern,  
Central and Southern.







# GENERAL IDEA OF NORTHERN, CENTRAL AND SOUTHERN

Does NOT mean that this will be the exact division of the state, just an idea.





# HOST FACILITY WILL NEED TO COORDINATE

1. Will need to make sure that materials are on hand. (Pipe, fittings, etc.)
2. Make sure sufficient fusion equipment is on site.
3. Attendees will need to be able to contact the host company to make arrangements to attend.





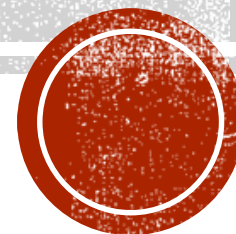
# COORDINATION EFFORTS

The PSC will NOT charge for our services and we do realize that materials and lights do not come free. The hosting agency will coordinate with all attendees to determine logistics of supplying materials and other supplies.





**FORMAT WILL BE  
LITTLE BIT DIFFERENT**





**REFRESHER VIDEOS WILL NO LONGER BE SHOWN ON THE DAY OF THE QUALIFICATION (SHOULD BE WATCHED PRIOR TO QUALIFICATION DAY OR PROPER TRAINING SHOULD BE GIVEN.)**

**FORMS MUST BE COMPLETED BEFORE QUALIFICATION SIGN IN TAKES PLACE, NO LONGER ACCEPTING HAND WRITTEN FORMS.**

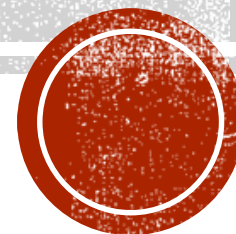
**FORM WILL BE AVAILABLE IN ELECTRONIC, FILLABLE FORMAT.**

**IDENTIFICATION MUST BE PROVIDED WITH COMPLETED FORM**





**IF YOU ARE WILLING TO  
BE A HOST**





**PLEASE EMAIL ME YOUR LOCATION AND A  
LIST OF THE OTHER SYSTEMS THAT  
WOULD BE IN RANGE OF YOUR LOCATION.**





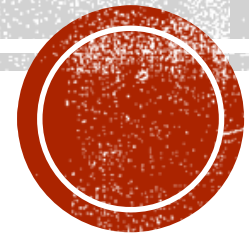
**RANDALL.HAND @PSC.ALABAMA.GOV**

*1-334-850-0044*





# QUESTION AND DISCUSSION TIME . . .



I am sure that we have not thought of everything!!